
Maintenance of Spray-Applied Fire Resistive Materials

Routine maintenance performed through testing and inspection of Spray-Applied Fire Resistive Materials (SFRMs) ensures that the product will be in-place for the design life of the structure and perform in actual building fire conditions.

Commercial structures undergo renovations and upgrades related to tenant change and use & occupancy change. As a result, partitions and walls may be removed, electrical wiring re-directed, mechanical equipment removed/replaced, and roof systems changed. When these conditions exist, any SFRM is susceptible to damage caused by impact and this can result in SFRM delamination. Structural steel beams, joists, columns, and decking may then be vulnerable to the damaging effects of fire.

The procedures outlined below are intended as a guide for inspection testing of SFRMs while conducting your periodic maintenance program.

1. Identify all areas throughout the structure that have undergone a renovation or upgrade since the previous inspection. In addition, identify all areas that are susceptible to periodic or regular maintenance traffic and periodic or regular public traffic.
2. Visually inspect the aforementioned areas and note all SFRM deficiencies such as material that has been removed or damaged.
3. Inspect surrounding SFRM near the damaged areas to ensure the required thicknesses and cohesion/adhesion characteristics are maintained.
4. Identify the type of SFRM utilized to protect the structural steel framework; i.e. beams, joists, columns, and decking. The type of SFRM can usually be determined by reviewing construction documents or by contacting SFRM Manufacturers.
5. Obtain instructions from the applicable SFRM Manufacturer detailing the repair procedures for the exact SFRM type that has been damaged.
6. Secure a sufficient quantity of SFRM from the applicable Manufacturer or contact the Manufacturer for names of qualified installers of the SFRM type. Repair of the existing SFRM shall be performed in accordance with the Manufacturer's published installation instructions.

The following test methods developed by the American Society for Testing and Materials (ASTM) and publication developed by The Association of the Wall and Ceiling Industries (AWCI) shall be consulted for specific information on testing and inspection of SFRMs:

- ASTM E605-93(2000) – *“Standard Test Methods for Thickness and Density of Sprayed Fire Resistive Material (SFRM) Applied to Structural Members”*
- ASTM E736-00 – *“Standard Test Method for Cohesion/Adhesion of Sprayed Fire Resistive Material Applied to Structural Members”*
- AWCI – *“Technical Manual 12-A Third Edition – Standard Practice for the Testing and Inspection of Field Applied Sprayed Fire-Resistive Materials; an Annotated Guide”*

Isolatek International believes that Commercial Building Owners/Managers should develop and implement a comprehensive plan detailing a **Periodic Inspection and Maintenance Program for SFRMs**. Should you have further questions pertaining to this matter, please contact the Isolatek International Technical Service Department at (800) 631-9600.